

November Mixed Waste Subgroup Highlights

The Mixed Waste (MW) Subgroup met on November 21, 1996. Joe Waring reported that he called the MW Focus Area (MWFA) to discuss how the needs the subgroup are developing will be used. The MWFA will look at our input to develop their complex-wide FY98 needs document. This year, science needs from each subgroup are also being gathered to be sent to the Focus Areas and the EM Science Program for funding. John Lafemina (PNNL) noted science needs during the discussion of the technology needs and reviewed them at the end of the meeting. John introduced Theresa Bergsman (PNNL) as the new science representative on the MW subgroup.

Tom Baker distributed the rewritten technology needs package along with a new Appendix A. This package, after the subgroup finishes its work with it, is in the correct format for the MWFA to receive our needs. Joe reviewed why certain needs from last year's list were removed from this year's. The Be powder and pyrophoric needs were removed because the materials are not considered MW. Two needs that dealt with Greater Than Category 3 (GTC3) waste were dropped because the forecast for this waste type dropped to zero this year, thus eliminating the need for treatment. After discussions with program managers one new need was added to the list this year: treatment of TRU waste contaminated with PCBs and ignitables. The following are the technology needs that were prioritized by the subgroup at this meeting:

1. Processing/treatment of RH-LLMW large-sized waste
2. Cost-effective characterization/verification technologies for MLLW treated by commercial vendors
3. Volume reduction techniques for RH-LLMW
4. Volume reduction techniques for RH-TRU
5. Segregation of RH-TRU waste from TWRS tanks into TRU and non-TRU (long-length equipment)
6. Segregation of RH-TRU waste (other than long-length equipment) into TRU and non-TRU
7. Decontamination of RH-TRU waste
8. Treatment of organic contaminated RH waste
9. Treatment of TRU waste contaminated with PCBs and ignitables
10. Fast, effective surveying of transportation packages
11. Cost-effective storage techniques for RH-LLMW and RH-TRU waste

Each of the above needs were discussed in depth including the schedules for treatment of the waste, the baseline technology, the cost to treat using the baseline technology, and the cost savings projected from using a better method or technology. It was noted that the cost savings for TRU waste treatment did not include any savings at the WIPP Site, only Hanford savings. A discussion took place as to whether an incinerator would ever be allowed to treat waste on-site and as to whether a plasma arc furnace was not just another name for an incineration device.

The attached table shows the technology needs scores agreed to by the subgroup. As shown, Need #1 has a very high score of 11 while the next six needs all scored seven and are considered high needs. In the transmittal letter to the MWFA it will be noted that #2 and 3, though they

have the same high rating as #4-6, they actually should be considered ahead of them. Need #2 is an urgent need that is needed within the next year or two and Need #3 has a huge cost savings potential compared to others on the list.

The subgroup decided that Need #1 would be prioritized very high, Needs #2 to #7 as high, Needs #8 and #9 as medium, and Needs #10 and #11 as low. Tom Baker will complete the technology needs statements and distribute to the subgroup members by December 4. All comments are due back to Tom by December 6 in order to get the needs statements to the management council members on December 10. There were three science needs that John Lafemina identified during the meeting. The subgroup agreed that the following were indeed MW science needs:

- development of non-intrusive, non-destructive characterization methods for non-radionuclide, hazardous components of MLLW;
- development of non-destructive TRU/non-TRU characterization/radionuclide mapping methods for contaminated RH-TRU waste;
- development of effluent-free, cost-effective, organic destruction methods.

The next MW subgroup meeting will be on January 9 at 1pm in the EESB, Stampede Room.